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## Using Graphics to Teach Evidence

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## USING GRAPHICS TO TEACH EVIDENCE

KEVIN C. McMUNIGAL\*

### I. INTRODUCTION

As an Assistant United States Attorney in the general crimes unit of a metropolitan United States Attorney's Office, I regularly tried a variety of cases ranging from bank robberies and drug offenses to white collar crimes. Regardless of the type of crime, I frequently found various types of graphics useful in presenting the case. Examples included a chart providing a point by point comparison of *modus operandi* in two armed bank robberies and a map of the scene of a controlled purchase of cocaine showing the locations and movements of multiple defendants, an informant, and federal agents. Such graphics helped jurors understand the charges, the evidence, and the structure and theory of the prosecution's case.

Graphics have also proved useful in teaching Evidence. I think of them as blueprints that expose the underlying architecture of an evidence rule or doctrine, an architecture that may not be obvious from the text of a rule or a verbal description of a doctrine. Anyone who has assembled a piece of furniture or a child's toy using written instructions is likely to have experienced how confusing purely verbal directions can be at times and how a well conceived diagram can cut through confusion and clearly convey what is sometimes difficult to get across using words alone.

Many students find some of the structures and concepts of the law of evidence opaque when conveyed by words alone. The Federal Rules of Evidence (FRE) made the law of evidence more accessible. But the conciseness of those rules at times renders them difficult to penetrate, and their significance is often not readily apparent to those uninitiated in the history and intricacies of evidence law. Graphic techniques prompt students to analyze evidence rules to discover the basic concepts that drive those rules.

A number of pedagogical purposes propel my reliance on graphics: (1) reaching visual learners; (2) maintaining student interest and engagement; (3) promoting active learning; and (4) providing assessment to students.

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\* Judge Ben C. Green Professor of Law, Case Western Reserve University School of Law. My colleagues Dale Nance and Calvin Sharpe provided helpful comments on this article.

### A. *Visual Learners*

Students bring a variety of learning styles to the classroom.<sup>1</sup> Some, for example, grasp material most effectively if given the opportunity to apply the material to specific, concrete problems while others learn best visually. Law school classes, which tend to be large, inevitably include a cross-section of students with disparate learning styles. Consequently, a challenge in effectively teaching Evidence, or any other course in the law school curriculum, is how to reach students who learn in different ways.

Bringing a variety of teaching methods into play in the classroom is one way to meet this challenge. By mixing methods, the instructor increases the odds of reaching more students than she would by using only one method. My classroom experience in teaching Evidence, Criminal Law, and Professional Responsibility supports the conclusion that graphics provide a particularly effective way to reach visual learners and add variety to one's teaching methodology. I regularly receive positive feedback from students for whom graphic devices are particularly effective in opening a door to understanding legal rules and the concepts underlying them.

### B. *Interest and Engagement*

The subject of Evidence requires students to master a good deal of difficult material. I often find that about two-thirds of the way through the semester, when students in my course are typically studying hearsay, many seem to hit a sort of "wall." The difficulty of recognizing hearsay and mastering the hearsay rule's many exceptions dampens the enthusiasm and confidence of some students about gaining command of the law of evidence.

I find that employing a variety of teaching techniques—such as lecture, question and answer, problems, video clips, and role-plays—is an effective way to keep students motivated and engaged throughout the semester. Graphics add significantly to this variety.

### C. *Active Learning*

A risk inherent in large law school classes is that students may become passive while listening to the professor lecture or interact with other students. Several of the graphic techniques I describe below, such as the "propensity diagram" and the Rule 609<sup>2</sup> "aperture grid," prompt each student to analyze and synthesize material in order to express and summarize it in graphic form. The process of translating a rule from verbal to graphic form is itself an active

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1. See generally DAVID A. KOLB, EXPERIENTIAL LEARNING: EXPERIENCE AS THE SOURCE OF LEARNING AND DEVELOPMENT 67-73, 76-85 (1984) (discussing individual learning styles and the learning style inventory).

2. FED. R. EVID. 609.

process that requires students to think through the ideas and structure underlying an evidence rule.

#### *D. Feedback*

Another problem with large law school classes is limited opportunity for students to obtain feedback on how well they understand the law of evidence. In many courses, the first genuine individualized assessment the student receives is a final grade in the course based exclusively, or primarily, on a final exam that obviously comes after the course is over. This is too late to serve as a vehicle for feedback or to use students' errors as teaching and learning opportunities. I provide feedback during the semester in part by giving weekly quizzes, often focusing on areas that regularly give students trouble. Making a mistake on a quiz can alert a student to material not fully grasped and can motivate the student to review it and seek out clarification prior to the final exam.

Class exercises involving graphics can provide feedback in two different ways. First, students can use graphics provided by the instructor to check themselves by comparing their understanding of a rule to the instructor's graphic. Second, when the instructor asks students to create or complete a graphic exercise, such as the propensity chart or the aperture grid described below, the instructor may provide feedback either by commenting on the student's graphic or by providing a graphic with which the student can compare her work.

I provide below a sampling of graphic devices dealing with relevance, character, and impeachment.

## II. RELEVANCE

A very simple graphic works well to introduce relevance: two boxes connected by an arrow. The box on the left represents the item of evidence and the box on the right represents the factual issue in the case that the item is offered to prove or disprove.



I analogize the evidence box on the left to an electric battery, the issue box on the right to a light bulb, and the arrow connecting the two to an electric wire. Electric current passing through the wire is the probative value of the piece of evidence. The item qualifies as relevant under FRE 401 if the item of evidence provides any "current" (i.e., has any tendency to prove or disprove the issue

regarding which it is offered).<sup>3</sup> The amount of "current" passing through the wire is its probative value. As we examine concrete relevance examples in class, I place particular items of evidence in the left hand "evidence" box and particular issues in the right hand "issue" box.

The same diagram is also useful to illustrate the relational nature of relevance. As the Advisory Committee's Note to FRE 401 states, "Relevancy is not an inherent characteristic of any item of evidence but exists only as a *relation between an item of evidence and a matter properly provable in the case.*"<sup>4</sup> By changing the issue in the right-hand box, the relevance of the item of evidence in the left-hand box changes as well. Assume, for example, that D is charged with the rape of V. D admits having sexual relations with V, but claims she consented. D offers on the consent issue the testimony of W, a friend of V, that just before the alleged rape V told W that she intended to have consensual sexual relations with D on the occasion in question. W's testimony, placed in the left-hand box, is relevant if the issue in the right-hand box is consent. But what if D is charged with statutory rape and the issue of consent in the right-hand issue box is replaced with the issue of V's age? The testimony of W, while relevant regarding consent, is irrelevant if age is the central issue.

Just as the amount of electric current passing through a wire may vary, so the probative value of different items of evidence may vary. By changing the item of evidence in the left-hand box, the instructor can also use this basic diagram to demonstrate that probative value is a matter of degree. If the issue to be proven is the identity of a burglar, the prosecution might offer the following items of evidence: (1) a witness at the scene of the burglary described the burglar as having approximately the same height and build as the defendant; (2) the defendant ran from police when they approached him shortly after the burglary; (3) the defendant's fingerprints were found at the scene of the crime on a crowbar that was used to force open the door of the residence burglarized. The amount of current passing through the wire (i.e., probative value) to the issue of identity increases as the instructor places the first, then the second, and finally the third item of evidence in the evidence box on the left of the diagram.

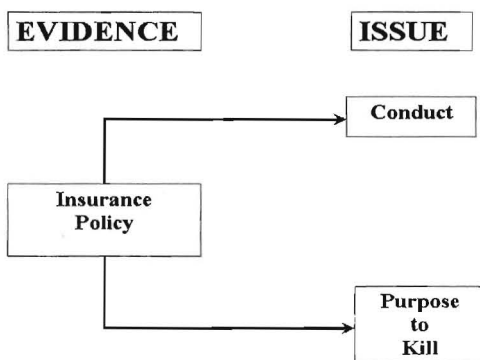
Students often struggle to grasp that more than one inference may be drawn from a single piece of evidence. A variation on the relevance diagram above helps illustrate this important point. Take, for example, motive in a homicide case. H is charged with the murder of W, his wife. H obtained a \$1,000,000 life insurance policy on W a few weeks before W was killed. H's conduct in taking out the insurance policy is relevant in proving two different elements of the murder charge: (1) conduct (that H was the killer) and (2)

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3. FED. R. EVID. 401.

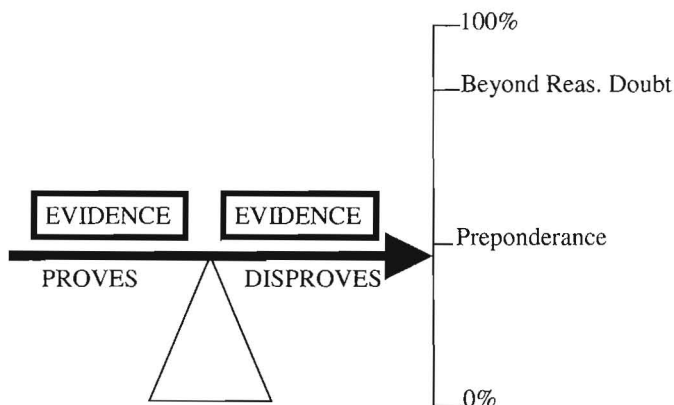
4. FED. R. EVID. 401 Advisory Committee's Note (emphasis added).

mental state (that H had purpose to kill W). Using two issue boxes on the right side of the diagram and two connecting arrows from the evidence box easily captures these two relevance theories and conveys the critical concept that multiple relevance theories may be based on a single piece of evidence.



A fulcrum and lever image is also useful in explaining basic relevance and related concepts. The following image helps make two important points. First, it illustrates that an item of evidence may be relevant by either helping to prove or to disprove an issue. Second, it helps students grasp the critical distinction between admissibility and sufficiency. The instructor can illustrate the standard of admissibility under FRE 401 and 402 with movement up or down of the arrow at the far right end of the lever. If the arrow moves at all when the item of evidence is added to either side of the fulcrum (i.e., if the evidence has “any tendency to make the existence of any fact”<sup>5</sup> important to the case “more probable or less probable”<sup>6</sup>) the evidence is considered relevant.

Sufficiency may be illustrated with the location of the arrow in reference to the appropriate civil or criminal standard of proof after all the evidence in the case has been added on both sides of the fulcrum.

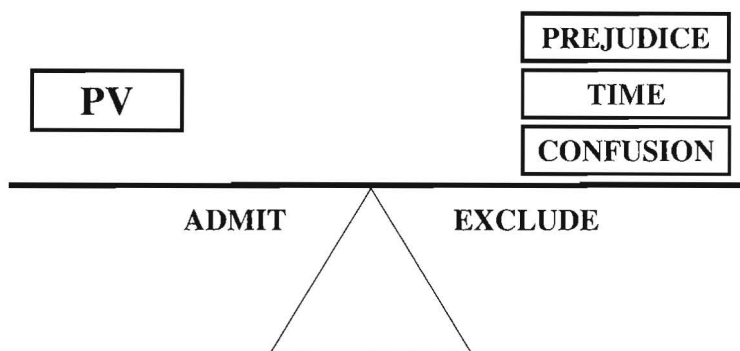


5. FED. R. EVID. 401.

6. *Id.*

A fulcrum and lever image also works well to illustrate the balancing required under FRE 403. The diagram below shows the various factors that may figure in a weighing of evidence under FRE 403. The letters "PV" stand for probative value.

## FRE 403

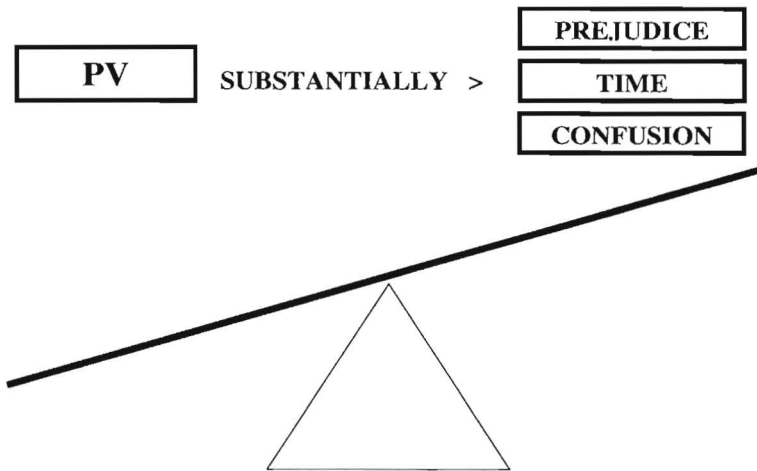


The following series of fulcrum and lever images illustrates FRE 403's standard for exclusion.<sup>7</sup> Each diagram represents a different balance point between FRE 403 factors favoring inclusion and exclusion. Students often overlook the word "substantially" in FRE 403 and view FRE 403 as applying a simple preponderance test under which exclusion would be warranted whenever the weight of factors favoring exclusion is greater than those favoring inclusion, even by a small margin. In doing so, they misread FRE 403 and misconstrue the policy behind it. These five diagrams prompt students to pay attention to the word "substantially" that appears before the word "outweighed" in FRE 403.

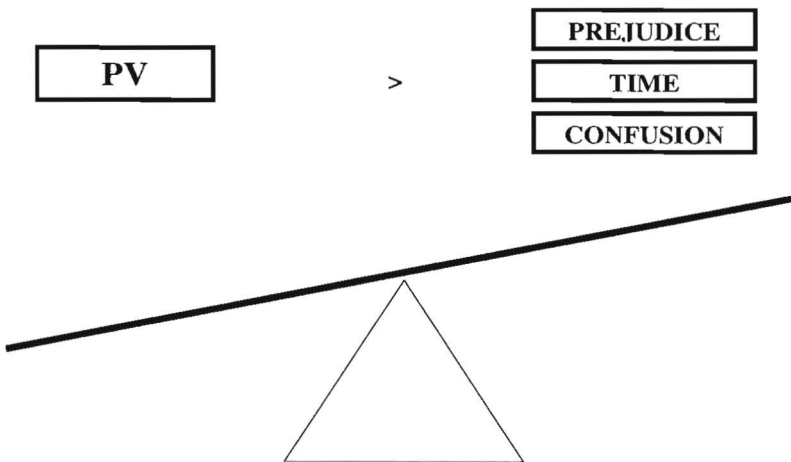
In the first diagram, probative value *substantially outweighs* prejudice, delay, and risk of confusion. In this situation, FRE 403 mandates admission.

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7. See FED. R. EVID. 403 ("Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence.").

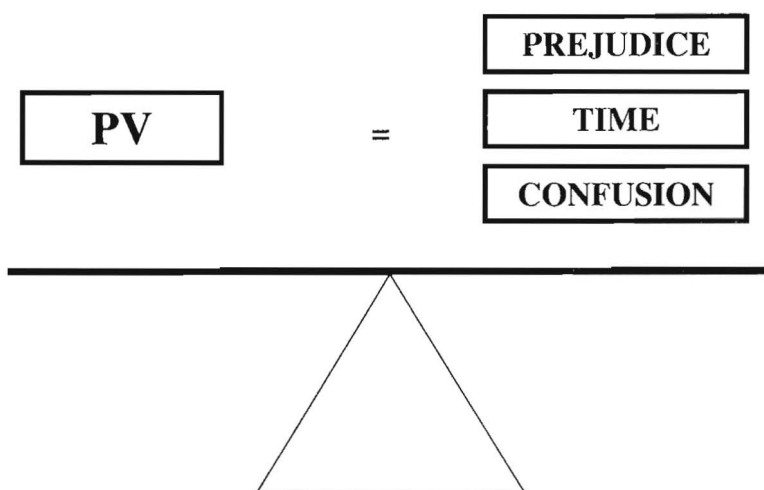


In the second diagram, probative value *outweighs* prejudice, delay, and risk of confusion, but not substantially. Here, FRE 403 mandates admission.

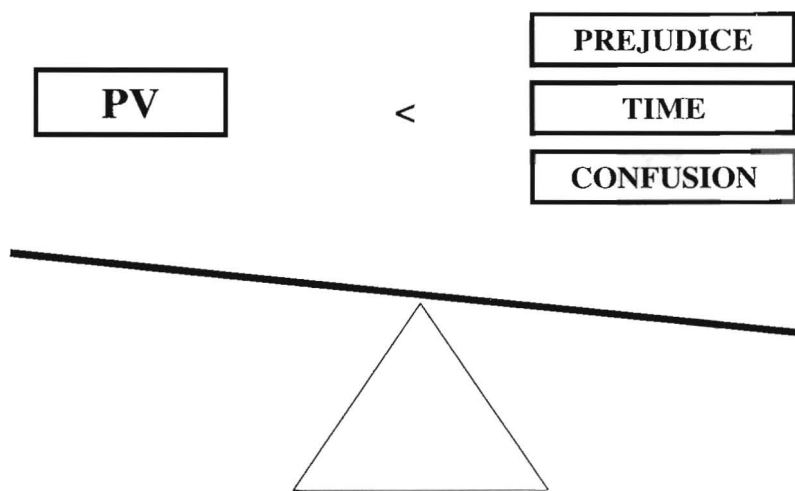


In the third diagram, probative value is *equal* to prejudice, delay, and risk of confusion. Once again, FRE 403 mandates admission.

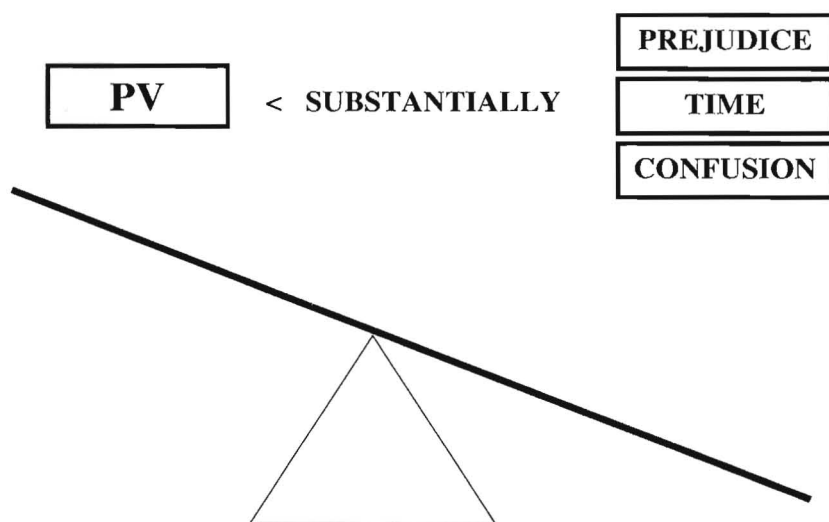




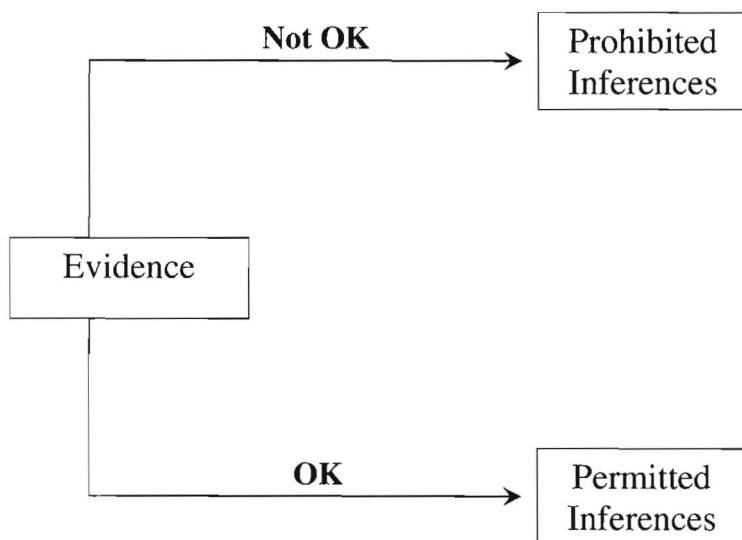
In the fourth diagram, probative value is outweighed by prejudice, delay, and risk of confusion, but not substantially. This is the situation in which students are likely to misread FRE 403 as requiring exclusion. But, again, FRE 403 mandates admission.



In the fifth and final diagram, probative value is *substantially outweighed* by prejudice, delay, and risk of confusion. Only in this situation does FRE 403 mandate exclusion.



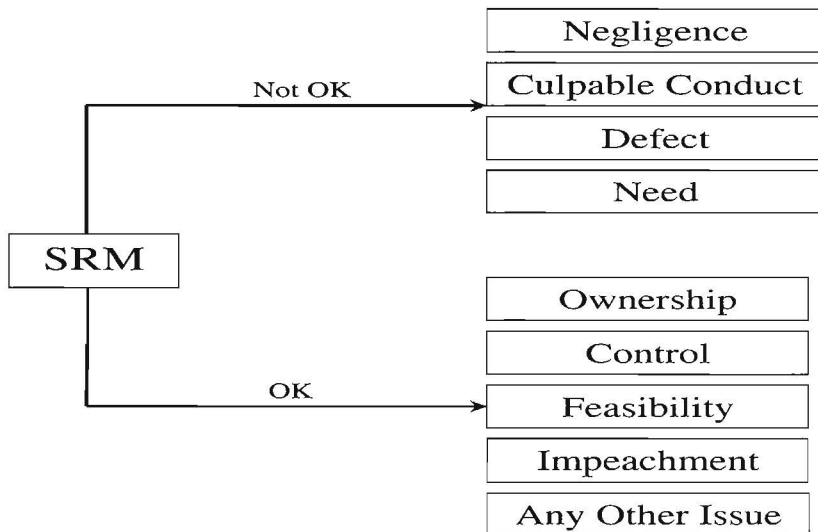
The fact that multiple relevance theories may flow from a single item of evidence and the fact that much of the law of evidence turns on distinguishing between permissible and impermissible theories are both fundamental to the rules found in Article 4 of the FRE as well as the hearsay rule in Article 8.<sup>8</sup> The following graphic conveys both of these ideas:



8. F.R.D. R. EVID. 802 ("Hearsay is not admissible except as provided by these rules or by other rules prescribed by the Supreme Court pursuant to statutory authority or by Act of Congress.").

In the evidence box on the left, the instructor can place any of a number of types of evidence addressed in Article 4, such as subsequent remedial measures,<sup>9</sup> offers of compromise,<sup>10</sup> payment of medical expenses,<sup>11</sup> or liability insurance.<sup>12</sup> On the right side, connected to the arrow labeled "Not OK," the instructor can place the inferences barred by the rule. Below this, connected to the arrow labeled "OK," the instructor can place inferences permitted under the rule. Here is an example based on FRE 407.<sup>13</sup>

### FRE 407



This simple diagram helps students grasp that items of evidence typically are not intrinsically admissible or inadmissible. Rather, admissibility turns on the theory of relevance offered in support of admission, reinforcing the importance of identifying and distinguishing theories of relevance in working with evidence rules.

9. FED. R. EVID. 407.

10. FED. R. EVID. 408.

11. FED. R. EVID. 409.

12. FED. R. EVID. 411.

13. FED. R. EVID. 407 ("When, after an injury or harm allegedly caused by an event, measures are taken that, if taken previously, would have made the injury or harm less likely to occur, evidence of the subsequent measures is not admissible to prove negligence, culpable conduct, a defect in a product, a defect in a product's design, or a need to a warning or instruction. This rule does not require the exclusion of evidence of subsequent measures when offered for another purpose, such as proving ownership, control, or feasibility or precautionary measures, if controverted, or impeachment.").

### III. CHARACTER

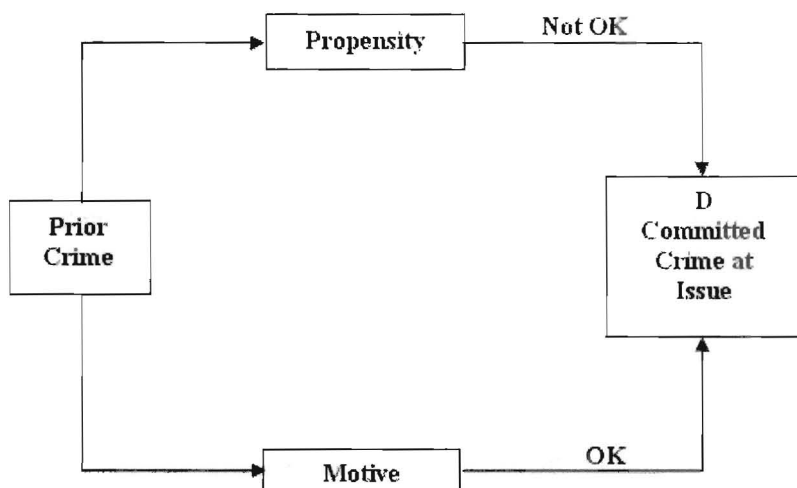
The rule on character evidence is easy to state and remember. Character evidence is inadmissible.<sup>14</sup> What, then, makes character evidence difficult to master? First is the fact that the rule against character is counter to both intuition and common experience since we rely on propensity evidence routinely in our daily lives. Another problem is *recognizing* character evidence—the use of a propensity inference to prove conduct in conformity with that propensity. A third source of difficulty is the complex web of exceptions to the ban on the propensity inference. With hearsay, the sheer number of exceptions seems overwhelming to students. With character, it is the structure of the exceptions—exceptions to which in turn there is a further exception, to which, in turn, there are further exceptions.

Graphics can help students recognize character and master the intricate structure of the exceptions to the ban on character evidence. Spotting a propensity inference is the key to recognizing character. A diagram, such as the one that follows, helps students distinguish between propensity and non-propensity inferences connecting the same piece of evidence to the same issue.

Imagine D is arrested and charged with a bank robbery in which the perpetrator used a note threatening to shoot the victim—teller if she failed to hand over the money in her cash drawer. While the bank robbery charge is pending, someone makes a telephone call to the teller threatening to kill her if she testifies. D is subsequently charged with attempted obstruction of justice based on the phone call. Prior to the obstruction trial, D pleads guilty to the bank robbery. At the obstruction trial, the principal point of contention is whether D made the threatening call, and the prosecution seeks to introduce the bank robbery to help prove that D made the call. If the prosecution's theory of relevance is based on *propensity* (that the bank robbery shows D has a propensity to violence, making it more likely that he acted in conformity with that propensity by making the threatening call), then FRE 404(a) bars admission. But if the prosecution's theory is based on *motive* (that the bank robbery gave D a reason to make the threatening call, making it more likely that D made the call), then 404(a) does not bar admission. FRE 404(b) specifically mentions motive as an allowable non-propensity use of a prior crime.

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14. FED. R. EVID. 404.



The exceptions to the character rule are not as numerous as the exceptions to the hearsay rule. But their structure is more complex. FRE 802<sup>15</sup> bans hearsay while other Article 8 rules, such as FREs 803<sup>16</sup> and 804,<sup>17</sup> create exceptions to that ban. FRE 404(a) similarly starts with a basic ban on use of a propensity inference.<sup>18</sup> FRE 404(a)(1)–(3), FREs 413–15, and FREs 607–09 then create exceptions in which use of a propensity inference is allowed. FRE 412(a) creates an exception to 404(a)(2)'s exception to 404(a)'s ban on character evidence, disallowing propensity evidence in sex offense cases.<sup>19</sup> FRE 412(b)(1)(B) then creates an exception to FRE 412(a)'s exception to 404(a)(2)'s exception to 404(a)(1)'s ban on character evidence, allowing the defendant in a sex offense case to use a propensity inference regarding consent based on prior conduct between the defendant and the victim.<sup>20</sup> FRE 412(b)(2) also creates an exception to the FRE 412(a) exception for use in civil cases. The following diagram reveals this tangled web of exceptions piled upon

15. FED. R. EVID. 802 ("Hearsay is not admissible except as provided by these rules or by other rules prescribed by the Supreme Court pursuant to statutory authority or by Act of Congress.").

16. FED. R. EVID. 803 (listing numerous hearsay exceptions where the availability of the declarant is immaterial).

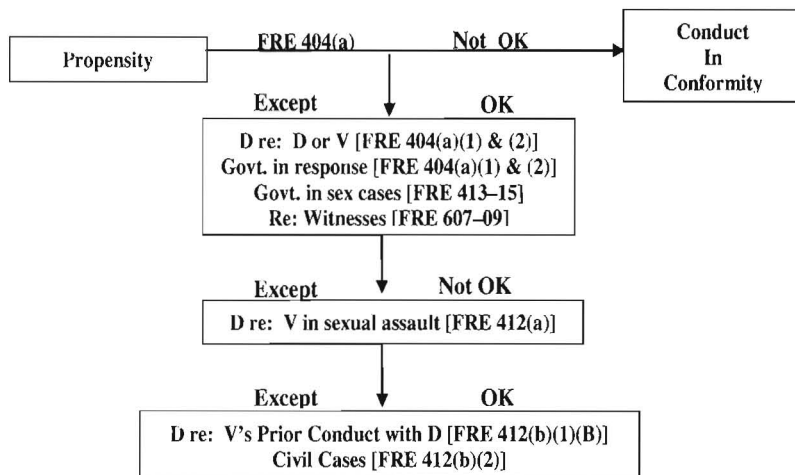
17. FED. R. EVID. 804 (listing numerous hearsay exceptions where the declarant is unavailable).

18. "Evidence of a person's character or a trait of character is not admissible for the purpose of proving action in conformity therewith on a particular occasion . . . ." FED. R. EVID. 404(a).

19. See FED. R. EVID. 412(a).

20. See FED. R. EVID. 412(b)(1)(B).

exceptions with the admissibility of character switching back and forth at each level, making it both easier to understand and remember.



#### IV. IMPEACHMENT

I use an "aperture grid"<sup>21</sup> graphic device, which analogizes FRE 609<sup>22</sup> to a camera lens, to help students decipher and remember the rule's complicated provisions on impeachment by prior conviction.

I first suggest that students clarify Rule 609 by breaking it into a series of provisions keyed to the type and age of the conviction and the identity of the witness being impeached. These provisions vary in restrictiveness in admitting prior convictions. If one thinks of Rule 609 as a camera lens, its rules can be thought of as different aperture settings on the lens. As one changes the aperture setting on a lens, its receptivity to light changes. Similarly, as one moves from provision to provision within Rule 609, receptivity to admission of prior convictions changes.

I distribute copies of the following blank "aperture grid" a few days before the class on Rule 609 and use an overhead transparency to explain its use.

21. See Kevin C. McMunigal, *Graphic Helps Students Decipher Evidence Rule*, THE LAW TEACHER, Spring 1996, at 8. A similar aperture grid of the rules governing extrinsic impeachment can be found in Kevin C. McMunigal & Calvin William Sharpe, *Reforming Extrinsic Impeachment*, 33 CONN. L. REV. 363, 368 (2001).

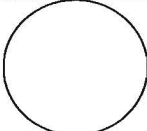
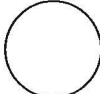



22. FED. R. EVID. 609 (discussing impeachment by evidence of conviction of crime).

FEDERAL RULE OF EVIDENCE 609 APERTURE GRID				
		Conviction/ Witness Category	"Weighing" Rule	Admission "Aperture"
<i>Least Restrictive</i>	1			
	2			
	3			
	4			
<i>Most Restrictive</i>	5			

I ask the students to prepare for the class on Rule 609 by ranking its provisions on the grid according to their restrictiveness, with the least restrictive at the top and the most restrictive at the bottom. They fill in the far left column with the conditions that trigger each provision. The weighing formula each provision uses for balancing probative value against the likelihood of prejudice goes in the middle column. In the far right column, I have them draw a circle, the size of which corresponds to the rule's restrictiveness. Finally, I suggest that they test their completed grids by asking themselves what happens under each provision if a conviction's probative value equals its likelihood of prejudice.

During the class session on Rule 609, I again put a transparency of the blank grid on the overhead projector and enlist the students to direct me in completing it. The grid can become illegible by the time we are done, so I put

up the printed version of the completed grid for students to compare with their own grids.

FEDERAL RULE OF EVIDENCE 609 APERTURE GRID				
		Conviction/ Witness Category	"Weighing" Rule	Admission "Aperture"
<i>Least Restrictive</i>	1	Crimen Falsi	None: Admit without weighing	
	2	Felony (not crimen falsi) + any witness other than criminal defendant	Rule 403: Exclude if prejudice substantially > probative value	
	3	Felony (not crimen falsi) + witness is criminal defendant	Admit if probative value > prejudice	
	4	10 years since conviction/release	Exclude unless probative value substantially > prejudice	
<i>Most Restrictive</i>	5	Misdemeanor (not crimen falsi)	None: Exclude without weighing	

To avoid reducing the students' incentive to work on their own grids both before and during class, I do not hand out copies of the printed form of the completed grid. At the end of the class, we go over what happens under each provision when a conviction's probative value equals likely prejudice.

Both the aperture analogy and the completed grid help reveal the underlying structure of Rule 609, leading to better understanding and retention of its provisions. The Evidence class in which I use this grid is typically highly active and participatory. In my view, this is partly because students come to class better prepared and more confident in their mastery of Rule 609, and partly because of the visual stimulation and participatory nature of the group exercise.



## V. CONCLUSION

I hope Evidence teachers find the graphics discussed in this Article helpful to increase variety in their teaching methodology and, in particular, to reach the many visual learners in their classrooms. I am happy to share slides of these graphics with anyone who would like to have them. I also welcome suggestions on how to improve these graphics and on other ways to introduce graphics into an Evidence classroom.